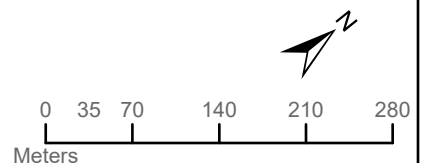


*Natural*  
AREAS SYSTEM

2023 NATURAL AREAS UPDATE

**SITE CRR11**

- █ NATURAL AREAS
- █ VEGETATION COMMUNITIES
- █ SPECIAL MANAGEMENT AREAS
- █ LINKAGES



MISSISSAUGA

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## CRR11

CLASSIFICATION Significant Natural Area	Park Name Hewick Meadows Park	PLANNING DISTRICT Credit River	AREA (Ha) 33.98
CONSERVATION AUTHORITY CVC	SUBWATERSHED Meadowvale North Watershed	OWNERSHIP Private/City	SURROUNDING LAND USE Residential / Parkland

### GENERAL SUMMARY

Along the Credit River from Highway 403 to Eglinton Avenue West. CRR11 is within 500 m of CE1 and is linked to CRR5 and CRR10 along the Credit River. Designated as an Environmentally Significant Area (ESA).

### PHYSICAL DESCRIPTION

Topography varies from undulating floodplain and tableland to steep valley walls. Valley wall slopes range between 25-45 percent (occasionally reaching 75 percent) with heights between 9-24 m. The primary soil type is imperfectly drained Chinguacousy clay loam. Other soil types include Oneida clay loam, Cooksville clay loam, and Jeddo clay loam. All of these soils developed within the Halton till plain. Along various sections of valley walls, grey shales of the Georgian Bay Formation are exposed. Seepage areas are present along the valley slopes representing minor discharge of groundwater from the soils.

### CONDITION

This site is currently in poor condition as FQI and species diversity is high, but mean coefficient is medium, but disturbances are extensive. Disturbances include extensive mountain bike and walking trails, soil compaction, vandalism, excessive noise from major roads, Canadian National Rail line and airplanes, erosion of valley walls and valley slopes where bare soil is present (portions of the Credit River in this site have been engineered with gabion baskets and large armour stone), a sanitary sewer has been installed along the Credit River valley, evidence of Emerald Ash Borer and decline of ash trees, and widespread invasive species. Highly invasive plant species (as regarded by Ontario Invasive Plant Council) are prevalent and include Garlic Mustard (*Alliaria*

*petiolata*), Winged Euonymus (*Euonymus alatus*), Wild Parsnip (*Pastinaca sativa*), Wild Chervil (*Anthriscus sylvestris*), Purple Loosestrife (*Lythrum salicaria*), Japanese Barberry (*Berberis thunbergii*), Tatarian Honeysuckle, Periwinkle (*Vinca minor*), Goutweed (*Aegopodium podagraria*), Giant Hogweed (*Heracleum mantegazzianum*), and European Buckthorn (*Rhamnus cathartica*). 130 introduced plant species are present at this site (representing 39.16% of the total number of species present). The surrounding land use is residential and a park.

### ECOLOGICAL LAND CLASSIFICATION

#### Number of Plant Communities

9 vegetation communities are present at this site (see accompanying figure); dry-fresh deciduous forest ecosite (FOD4); dry-fresh sugar maple deciduous forest ecosite (FOD5); dry-fresh sugar maple-oak deciduous forest type (FOD5-3); fresh-moist willow lowland deciduous forest type (FOD7-3); dry-fresh white cedar mixed forest ecosite (FOM4); dry-moist old field meadow type (CUM1-1); mineral cultural thicket ecosite (CUT1); reed-canary grass mineral meadow marsh type (MAM2-2); open aquatic (OAO).

#### Significant Plant Communities

There are no Significant Plant Communities in CRR11.

### SPECIES RICHNESS

#### Flora

The native FQI is 56.04 which is a high value, and the native mean coefficient is 3.94 which is a medium value. The native FQI and the native mean coefficient have both increased from previous values of 55.53 and 3.93, respectively.

There are 332 floral species documented for this site.

1 provincially significant flora species has been noted; very rare in Ontario, however a variety of this species is frequently planted.

14 locally significant flora species have been noted on site; 8 rare species (known from 1 to 3 locations), and 6 uncommon species (known from 4 to 10 locations) within the City.

75 Credit Valley Conservation flora Species of Conservation Concern (Tier 1-3).

### **Fauna**

A total of 49 birds, 7 mammals, 4 amphibians, 3 reptiles, and 12 lepidoptera (including Monarch butterfly) have been recorded at this site. Most bird species noted are habitat generalists such as American Robin, Black-capped Chickadee and Northern Cardinal. Thicket-dependent bird species, such as Grey Catbird and Eastern Kingbird, have been noted. Swallows were observed foraging over the Credit-River and nearby open areas. Area-sensitive birds including Black-and-white Warbler and American Redstart were documented in this natural area. Amphibians documented from the site include: Redback Salamander, Eastern American Toad, Green Frog, and Northern Leopard Frog. Three reptiles documented from this natural area include Common Snapping Turtle, Northern Water Snake, and Eastern Garter Snake.

There are 75 faunal species documented for this site.

3 provincially significant fauna species have been noted: 1 Threatened, 2 Special Concern.

34 Credit Valley Conservation fauna Species of Conservation Concern (Tier 1-3).

### **MANAGEMENT RECOMMENDATIONS**

1. The City park, Hewick Meadows, is included

within this natural area and should be managed in regard to their proximity to this natural area.

2. The Credit River Valley is significant, and this should site be considered for the development of a Conservation/Management Plan.

### **REFERENCES**

Ecologistics Limited. 1979. Credit River Watershed, Environmentally Significant Areas.

Dougan & Associates. 2005. Scoped Environmental Impact Study for Proposed Lots 11, 12 & 13 Thorny-Brae Place, Mississauga, Ontario. Prepared for Howlett Development & Construction Services Ltd. May 2005.

Dougan Associates Ecological Consulting & Design. 2009 (February, 18). Scoped Environmental Impact Study for Thorny Brae Place, Part of Lot 3 & 4, Range 5 (N. of Dundas Street), Mississauga, Ontario.

WSP Canada Ltd. 2017. Thorny Brae Place, Mississauga, ON, Residential Re-Development Scoped Environmental Impact Study (CRR11).

## ECOLOGICAL LAND CLASSIFICATION

### Dry-Fresh Deciduous Forest Ecosite (FOD4)

This forest is a thin strip between cultural meadows. The canopy of this forest is dominated by Manitoba Maple (*Acer negundo*), Trembling Aspen (*Populus tremuloides*) White Oak (*Quercus alba*), and Sugar Maple (*Acer saccharum*). Canopy trees are greater than 25 m in height and cover greater than 60% of the community. The sub-canopy consists of Green Ash (*Fraxinus pennsylvanica*), Sugar Maple, Basswood (*Tilia americana*), Shagbark Hickory (*Carya ovata*) and Riverbank Grape (*Vitis riparia*). Sub-canopy trees are 10 to 25 m in height and cover between 25 and 60% of the layer. The understory is sparse with Green Ash saplings as well as European Buckthorn (*Rhamnus cathartica*), Sugar Maple and Chokecherry (*Prunus virginiana*) that are 2 to 10 m in height and cover 25 to 60% of the layer. The ground layer contains a variety of species including Ostrich Fern (*Matteuccia struthiopteris*), Sensitive Fern (*Onoclea sensibilis*), White Avens (*Geum canadensis*), and Virginia Creeper (*Parthenocissus quinquefolia*). Ground vegetation is less than 2 m in height and covers greater than 60% of the community.

### Dry-Fresh Sugar Maple Deciduous Forest Ecosite (FOD5)

This wooded slope is dominated by Sugar Maple (*Acer saccharum*) and Northern Red Oak (*Quercus rubra*) with the occasional Norway Maple (*Acer platanoides*), Manitoba Maple and American Beech (*Fagus grandifolia*). Canopy trees are greater than 25 m in height and cover greater than 60% of the community. The sub-canopy consists primarily of Sugar Maple, American Basswood, Manitoba Maple, American Beech and Trembling Aspen that are 10 to 25 m in height and cover between 25 and 60% of the layer. The understory is dominated by Chokecherry (*Prunus virginiana*), European Buckthorn, Witch-hazel (*Hamamelis virginiana*), and saplings of the canopy and sub-canopy trees. Understory vegetation is 2 to 10 m in height and cover 25-60% of the community. The ground layer contains a variety of species including Zigzag

Goldenrod (*Solidago flexicaulis*), Poison Ivy (*Toxicodendron radicans*), Virginia Creeper, Garlic Mustard (*Alliaria petiolata*), Pennsylvania Sedge (*Carex pensylvanica*) and May-apple (*Podophyllum peltatum*). Ground vegetation is less than 2 m in height and covers 25-60% of the community.

### Dry-Fresh Sugar Maple-Oak Deciduous Forest Type (FOD5-3)

The canopy is dominated by Sugar Maple and Northern Red Oak. Canopy trees are greater than 25 m in height and cover greater than 60% of the community. The sub-canopy is also dominated by Sugar Maple with the occasional White Ash (*Fraxinus americana*), Eastern Hophornbeam (*Ostrya virginiana*), and Shagbark Hickory. Sub-canopy trees are 10 to 25 m in height and cover greater than 60% of the community. The understory is dense (greater than 60% cover) and primarily contains Grey Dogwood (*Cornus foemina*), European Buckthorn and Chokecherry that are 2 to 10 m in height. Ground vegetation primarily consists of Rosey Sedge (*Carex rosea*), Tick-trefoil (*Desmodium glutinosum*), Wild Columbine (*Aquilegia canadensis*), Large False Solomon's Seal (*Maianthemum racemosum*) and May-apple. Ground layer vegetation is less than 2 m in height and covers between 25 and 60% of the community. Several prairie indicators have been documented from the thicket at the edge of this community, including New Jersey Tea (*Ceanothus americanus*), Yellow Pimpernel (*Taenidia integerrima*) and Virginia Mountain-mint (*Pycnanthemum virginianum*).

### Fresh-Moist Willow Lowland Deciduous Forest Type (FOD7-3)

The floodplain has a diverse canopy of Hybrid Willow (*Salix xfragilis*), Manitoba Maple, Green Ash, and Black Walnut (*Juglans nigra*). Canopy trees are greater than m in height and cover between 25 and 60% of the community. The sub-canopy contains Manitoba Maple, Willow, Eastern White Cedar (*Thuja occidentalis*), White Elm (*Ulmus americana*), Riverbank Grape that are 10 to 25 m in height and cover greater than 60% of the community. The understory is European

Buckthorn, Red-osier Dogwood (*Cornus sericea*), Chokecherry, Riverbank Grape, and Staghorn Sumac (*Rhus typhina*). The understory is dense (greater than 60% cover) and 2 to 10 m tall. The ground layer is also dense (greater than 60% cover) with Reed-canary Grass (*Phalaris arundinacea*), Giant Ragweed (*Ambrosia trifida*), Great Manna Grass (*Glyceria maxima*), Spotted Joe-pye Weed (*Eupatorium maculatum*), Spotted Jewelweed (*Impatiens capensis*) and Stinging Nettle (*Urtica dioica*). Scattered along the river edge are pockets of Cattail (*Typha* spp.) and Purple Loosestrife (*Lythrum salicaria*). Ground layer species are less than 2 m in height.

#### Dry-Fresh White Cedar Mixed Forest Ecosite (FOM4)

This forest is dominated by Eastern White Cedar in the canopy. There are sparse Northern Red Oak, American Basswood and Paper Birch (*Betula papyrifera*). The canopy is very dense (greater than 60% cover) and with a uniform height of greater than 25 m. The sub-canopy has similar abundance of Eastern White Cedar, Manitoba Maple and Sugar Maple. It is less dense, covering 25 to 60% of the layer, and is 10 to 25 m tall. The understory is sparse with Chokecherry and European Buckthorn, covering 10 to 25% of the layer and is 1 to 10 m tall. The ground layer is very sparse (less than 10% cover) with scattered individuals of Green Ash and Chokecherry, about 0.5 to 1 m tall.

#### Dry-Moist Old Field Meadow Type (CUM1-1)

The meadow has a mostly open canopy (10 to 25% cover) of Staghorn Sumac, European Buckthorn and Riverbank Grape. Canopy species are 2 to 10 m in height. The subcanopy consisted of tall herbaceous species 1 to 2 m tall that cover greater than 60% of the layer. The most common species are Canada Goldenrod (*Solidago canadensis*), Smooth Brome (*Bromus inermis*), Riverbank Grape and Wild Parsnip (*Pastinaca sativa*). The understory is also dense vegetation that are 0.5 to 1 m. It is composed of Hoary Alyssum (*Berteroa incana*), White Sweetclover (*Melilotus albus*), Canada Goldenrod and Riverbank Grape. The lowest layer, less than 0.5

m and covering greater than 60% of the layer is dominated by Purple Crown-vetch (*Securigera varia*), Riverbank Grape and Bird's-foot Trefoil (*Lotus corniculatus*)

#### Mineral Cultural Thicket Ecosite (CUT1)

The thicket has an open canopy (10-25% cover) with Manitoba Maple and Green Ash. Canopy trees are 10-25 m in height. The sub-canopy is dense with Manitoba Maple and Riverbank Grape that are 2-10 m in height and cover greater than 60% of the community. The understory is also dense with Multiflora Rose (*Rosa multiflora*), Riverbank Grape, and Red-osier Dogwood. Understory vegetation is 0.5-2 m in height and covers greater than 60% of the community. The ground layer is dominated by Garlic Mustard that is less than 0.5 m in height and covers greater than 60% of the community.

#### Reed-canary Grass Mineral Meadow Marsh Type (MAM2-2)

This community has an open canopy (2-15 m in height; <10% cover) of Hybrid Willow and White Elm. The sub-canopy is American Burreed (*Sparganium americanum*), Rice Cutgrass (*Leersia oryzoides*), Devil's Beggerticks (*Bidens frondosa*), Gray Dogwood (*Cornus racemosa*), Spotted Jewelweed and Soft-stemmed Bulrush (*Schoenoplectus tabernaemontani*). The sub-canopy vegetation is 1-2 m in height and has >60% cover. The understory is Reed-canary Grass, Purple Loosestrife, Riverbank Grape, and Northern Water-plantain (*Alisma trivale*). Understory vegetation is 0.5-2 m in height and covers greater than 60% of the community. The ground layer contains a variety of wetland and non-native species including True Forget-me-not (*Myosotis scorpioides*), False Nettle (*Boehmeria cylindrica*), Purple Loosestrife, and Moneywort (*Lysimachia nummularia*). Ground vegetation is less than 0.5 m in height and covers greater than 60% of the community.

#### Open Aquatic (OAO)

The Credit River is classified as an open aquatic community. The vegetation associated with the

Credit River is primarily located along the banks,  
in surrounding vegetation communities.